

REMARKS

Claims 1 and 14-16 will be pending upon entry of the present amendment. Claim 1 is currently amended. Claim 2 has been canceled. New independent claim 14 has been added; new dependent claims 15 and 16 have been added. No new matter has been added to the application. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

One embodiment of the present invention is a magnetic tape, which is one of a plurality of magnetic tapes, manufactured by feeding a broad magnetic tape into an array of upper and lower disk-like blades in the configuration of Figure 2. In one embodiment, each of the plurality of magnetic tapes is sliced from the broad magnetic tape by a left set and a neighboring right set of blades, wherein each set of blades contains one upper blade 6 and one lower blade 7. Accordingly, in one embodiment, each of the plurality of manufactured magnetic tapes includes both a left cut surface and a right cut surface as in Figure 5. During recording and reproducing processes, the left cut surface and the right cut surface may be dragged along guide surfaces, and parts of the cut surfaces may peel and drop off of the magnetic tape. In such embodiments, the inventors have considered the irregular raised and depressed patterns and discovered relationships that minimize risk of peeling and dropping parts of both cut surfaces of each of the plurality of magnetic tapes.

The applicants point out that this discussion of embodiments does not limit the presented claims in any way, but is merely for the benefit of the Examiner.

I. Rejections Under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a)

In the Office Action, at paragraph 4, claims 1-2 were rejected under 35 U.S.C. §102(b), or in the alternative 35 U.S.C. §103(a), as allegedly unpatentable over *Akira* (JP 11-296839), hereinafter *Akira*.

A. The range where an irregular raised and depressed pattern becomes locally maximal

The Examiner has asserted that *Akira* teaches a protruding portion is formed on the cutting edge surfaces of the magnetic tape wherein the protrusion forms a local maximum. The Examiner used disclosures from *Akira* paragraphs [0004], [0008]-[0011], and Figure 1 to calculate that the local maximum protrusion falls in a range of 22.3 to 62.8 percent of the supporting body 11. The Examiner has further asserted that even if the ranges listed in the present claims are not anticipated by *Akira*, then it would be obvious to one skilled in the art to view *Akira* and adjust the location of the peak point (*e.g.*, local maximum) to eliminate shaving waste and improve tape performance.

The applicants respectfully disagree with the Examiner and submit that *Akira* does not indicate where the local maximum is located in a cut surface of the supporting body 11. The value stated in *Akira* [0009], (3) (0.05  $\mu\text{m}$  or more, more preferably 0.1  $\mu\text{m}$  or more, 0.6  $\mu\text{m}$  or less, especially preferably 0.15  $\mu\text{m}$  or more, 0.4  $\mu\text{m}$  or less), indicates a distance of  $\delta$  as shown in Figure 1. As *Akira* describes in paragraph [0012],  $\delta$  represents a distance from datum line 18 perpendicularly drawn from the top-most vertices 17 of the curved portion of the supporting body to the slit end surface 15 of the back coat layer 14. Therefore, *Akira* does not disclose, teach, or suggest any local maximum position (*e.g.* the distance from the back coat layer) in a cut surface of the supporting body 11. The Examiner's assertion that the value stated in paragraph [0009], (3), represents a range of the local maximum located from the center point of the supporting body 11 is incorrect.

Nevertheless, *Akira* does disclose lower and upper limit thicknesses in  $\mu\text{m}$  (*See Akira* paragraph [0067] and the table below):

	Lower Limit	Preferable Lower Limit	Preferable Upper Limit	Upper Limit
Thickness of supporting body 11	2			4.7
Thickness of non-magnetic layer 12	1	1	2	2.2
Thickness of magnetic layer 13	0.1	0.1	0.8	1
Thickness of back coat layer 14	0.1	0.2	0.8	1
Total Thickness of magnetic tape 1	3	4	6.8	7

*Akira* further discloses that the local maximum is located closer to the non-magnetic layer 12 with respect to the center (as shown by line 16) of the supporting body 11. In view of this, if a local maximum position in a cut surface of the magnetic tape 1 is calculated according to the foregoing disclosure, the local maximum *may* fall into the 40% - 70% range recited in original claim 1.

B. The prior art does not disclose a first cut surface and a second cut surface

*Akira*'s Figure 1 shows only one cut surface of the magnetic tape 1, whereas the present application recites a first cut surface and a second cut surface both becoming locally maximal. Accordingly, *Akira* fails to disclose the concept of "an upper blade side projection portion" and a "lower blade side projection portion."

C. The prior art does not disclose ratios between cut surfaces

Amended claim 1 includes the recitation from canceled claim 2 that "the ratio of BU/T to BL/T is equal to or larger than 0.9 and equal to or smaller than 1.1." The prior art, *Akira*, does not disclose a second cut surface on a magnetic tape, and therefore, cannot possibly disclose, teach, or suggest a relationship between first and second cut surfaces where the distance, BU, and the distance, BL, from the back coat layer to respective raised portions (that become local maxima) formed in both cut surfaces of the magnetic tape are substantially equal. Further, because the Examiner offered no substantive and specific rejections for canceled claim 2, the applicants respectfully assert that amended independent claim 1 is allowable. In light of the above discussion, the applicant's have clearly distinguished amended claim 1 from the prior art, and the applicants respectfully request that the Examiner withdraw the rejection.

II. New Claims 14-16

The applicants herein submit new independent claim 14. The Examiner will recognize that independent claim 14 contains the general recitations of independent claim 1

except claim 14 more distinctly identifies allowable subject matter and claim 14 removes the limitation that the magnetic tape is cut into predetermined width. The applicants also submit new dependent claims 15 and 16, which depend from claim 14. For the reasons stated above, the applicants assert that claims 14-16 contain patentable subject matter and request the Examiner grant allowance.

III. Conclusion

In light of the above amendments and remarks, the applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that pending claims 1 and 14-16 are allowable. Applicants, therefore, respectfully request that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact Mr. Carlson by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is further encouraged to contact Mr. Carlson by telephone to expediently correct such informalities.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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